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ABSTRACT

The evaluation summary covers the first year's operation of the Appalachia Educational Laboratory's Employer-Based Career Education (AEL/EBCE) program. The report's first section describes the student, employer-related, and parent-related goals of the program; program operation and costs; and replication concerns (transportation, costs per student, site coordination, and translation of student work into academic credit). Another section on methodology describes the students and employers who participated in the program, the program's treatment of the students and employers, and the design and use of the various instruments used in the program evaluation. A third section on results considers students' academic achievements, career maturity, attitudes toward EBCE and miscellaneous student indicators, and parents' and employers' reactions to the program. Two final sections present a summary and conclusion and a discussion of the evaluation. Eight appendixes which collectively comprise 25 pages include: number, title, and authors of FY 1973 EBCE Evaluation Reports; numbers of students placed at employer sites 1972-73; employer site/cluster distribution; semantic differential; activity sheet; student interview form; parent interview schedule; and parent questionnaire. (JR)

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Employer-Based Career Education

Evaluation Summary 1972-1973

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Cover picture: Sam Burge, an EBCE student learns the fundamentals of operating a television camera at WMUL-TV in Nitro, West Virginia

Employer-Based Career Education

Evaluation Summary 1972-73

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Preface

One of the four career education models sponsored by the National Institute of Education is Employer-Based Career Education (EBCE). A major problem focus of EBCE is the unpreparedness of youth for employment, further study, and adult life. The education setting is shifted from the existing school system to an adult, employer-based and action learning environment.

One of four concurrent preliminary tests of the EBCE model has been completed by the Appalachia Educational Laboratory, Inc. (AEL) during the 1972-73 academic year. The results of the AEL/EBCE test are summarized in the following report. The focus of this summary is the degree to which previously established program objectives were met upon completion of the first test year, and the substance of the summary is based on nine separate evaluation studies presented in a technical report series.

Dr. James H. Sanders, Evaluation Specialist, was responsible for EBCE evaluation design, data collection and reporting, and worked under the general direction of Dr. Charles L. Bertram, Director of Research and Evaluation for the Laboratory. Data analysis and technical report preparation for the evaluation studies were subcontracted to Dr. James T. Ranson and Dr. John T. Seyfarth of the West Virginia College of Graduate Studies during the summer of 1973. Dr. Ermel Stepp, Evaluation Specialist with the Laboratory, also assisted with data analysis and report preparation. Members of the EBCE design and operations staff reacted to early drafts of all reports, including this summary, in order to increase the technical quality of the reports and to insure that the first year evaluation results are appropriately used in FY 74 program planning and operation.

Table of Contents

	Page
Preface	ii
Introduction	1
Program Description	3
Student Goals	4
Employer-Related Goals	5
Parent Related Goals	5
Program Operation and Costs	5
Replication Concerns	6
Transportation	6
Cost Per Student	6
Site Coordination	6
Translation of Student Work into Academic Credit	6
Methodology	7
Subjects	7
Students	7
Employers	11
Treatment	12
Students	12
Employers	13
Instrumentation	14
Design	17
Results	18
Students	18
Academic Achievement	18
Career Maturity	24

Attitude Toward EBCE 26

Miscellaneous Student Indicators 27

Parents 29

Employers 30

Summary and Conclusions. 31

Discussion 35

Appendix A, Number, Title, and Authors of FY 73 EBCE Evaluation Reports. 37

Appendix B, Numbers of Students Placed at Employer Sites 1972-73 39

Appendix C, Employer Site/Cluster Distribution 41

Appendix D, Semantic Differential. 44

Appendix E, Activity Sheet 51

Appendix F, Student Interview Form 53

Appendix G, Parent Interview Schedule. 56

Appendix H, Parent Questionnaire 61

List of Tables

Table No.		Page
1	Credits Needed and Received FY 73.	10
2	Classification of Employer Sites	11
3	Comparison of Growth Rate of EBCE Group I Students with National Norms	19
4	Mean Growth Scores and Standard Deviation by ITED Subtests and Testing Period.	21
5	Mean Scores on the Cognitive Skills and Learning Attitude Scales of the Student Information System by Student Group and Testing Period	23
6	Subtest and Total Means and Standard Deviations on the Career Development Inventory by Group and Month of Testing .	25
7	Mean Scores on Five Scales of the Student Information System According to Student Group and Testing Period.	28

Introduction

The purpose of this summary evaluation report is to present an integrated synopsis of several evaluation studies conducted as a part of the Employer-Based Career Education (EBCE) program development effort during the year beginning September, 1972, and ending June, 1973. The purpose of these studies was to determine if the stated objectives of the program were met during the year, and to document the implications of the findings for the EBCE program.

The separate evaluation studies are reported in a series of technical reports which treat the different areas of measurement in considerably more detail than can be afforded in this summary. For example, the report entitled Employer-Based Career Education: Analysis of Scores on the Career Development Inventory (Technical Report No. 37) gives a detailed description of the instrument, tables of data, and a detailed report of interpretations which are based on interaction with EBCE program staff who worked daily with the students. These technical reports are referenced throughout this report as additional detail is useful but too cumbersome to include in the summary. A list of available EBCE evaluation reports is given as Appendix A.

The differentiation between formative and summative evaluation is usually according to the intended use of the results. The function of formative evaluation is to indicate needed changes in the program as the program is being developed. The purpose of summative evaluation is to indicate (usually to consumers) if the total program has reached its goals or objectives. Since the purpose of the EBCE evaluation studies was to determine if the objectives of the program had been met by the end of the first academic year, the report may be considered summative in intent so far as the past year (1972-73) is concerned. However, since the EBCE program staff has reacted to each of the

reports and frequently suggested implications for program change for the current year (1973-74), the function of the report may also be considered formative.

As recently indicated in the Guidelines for Preparing Evaluation Plans for Model II provided by the National Institute of Education,[1] the general purposes of evaluation for program development are: (1) to provide information on the effectiveness of the program in reaching specific objectives, (2) to provide information which may lead to program revision, and (3) to give an indication of the resources, including costs, required for the program objectives to be met. This report does indicate the degree to which identified program objectives were met during the past year, and information is provided which is leading to program revision during the year beginning September, 1973. Intensive cost studies are planned for the year beginning in September, 1973,[2] but were not completed during the initial year of development. Only approximations of past cost requirements and goals for future requirements are contained in the following report.

The organization of the report is first to describe the EBCE program (what it is), relate the degree to which objectives were met (what it did), and to summarize implications for change. The program description will include a statement of the goals and objectives of the program, and a section on methodology which will describe the instruments and other evaluation procedures.

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[1]National Institute of Education. Guidelines for Preparing Evaluation Plans for Model II. (Washington: NIE, April 19, 1973), p. 4.

[2]James H. Sanders. Employer-Based Career Education Program: Summative Evaluation Plan. (Charleston, W. Va.: Appalachia Educational Laboratory, Inc., July, 1973), pp. 17-19.

Program Description

In June of 1973, the Appalachia Educational Laboratory (AEL) completed the first year of development and testing of the EBCE program. The AEL/EBCE program is one of four such developmental programs funded by the National Institute of Education for the purpose of providing an alternative educational experience for a cross section of high school age youth. The AEL/EBCE program is characterized by emphasis on direct employer site experiences; personalization of each student's program in terms of individual needs, interests, and abilities; supplementation of field experience with academic learning center activities and instruction; and translation of the learning experiences into credits acceptable to the school system for the granting of diplomas.

The AEL/EBCE program is designed and developed for the purpose of helping each student develop the skills needed to live and helping each student to live his life as a more complete human being. These life skills are designed to include career, social, and avocational goal identification, and decision-making skills.

A more complete description of the AEL/EBCE program including a "walk-through" of an actual student from recruitment to completion of the program is given in the Executive Summary of the FY 1974 Operational Plan.[1]

The AEL/EBCE efforts for FY 73 were guided by the following set of goals which were identified and refined through interaction of the program staff and the evaluators. These goals indicate expected outcomes from students, employers, and parents, and were used as a point of departure for the evaluation of the program.[2]

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[1]Appalachia Educational Laboratory, Inc. Employer-Based Career Education Program Operational Plan, FY 1974 Executive Summary. (Charleston, W. Va.: AEL, July, 1973), p. 2.

[2]James H. Sanders. Outline of Product Evaluation Plan for Employer-Based Career Education. (Charleston, W. Va.: Appalachia Educational Laboratory, Inc., 1972).

Student Goals. Consistent with each student's program profile, i.e., needs and interests, and given a reading ability level of at least grade 6.0 as measured by a nationally recognized test instrument, AEL/EBCF program students should be able to:

1. Make a realistic career choice based on abilities, interests, and values and the requirements of selected career areas.
2. Increase their knowledge of the variety of opportunities in the world of work.
3. Identify the functional, adaptive, and specific skills required for selected work situations of their choice.
4. Develop acceptable problem-solving, planning, and decision-making skills.
5. Document their educational needs (with the assistance of staff) in relation to their career and/or academic goals.
6. Develop the skills and education necessary to enter their career area or pursue their career at a higher educational level upon completion of grades ten through twelve.
7. Develop the communication skills necessary to function competitively in the career areas of their choice.
8. Develop their abilities, interests, and values within the context of selected career areas in order to become a more valuable citizen for society, and to develop competence in their social and personal skill areas.
9. Identify some social issues which can be critically examined in the context of selected career areas and/or the surrounding community.
10. Critically examine one or more social issues in the context of career areas and/or the surrounding community.
11. Evaluate their value system against encountered views on social issues and change, modify, or defend their value system accordingly.
12. Identify the opportunities in the community and the world of work which can be used for fulfilling personal, social, and recreational interests.
13. Possess the minimum essential skills and knowledge necessary for utilizing the opportunities in the community and the world of work to fulfill their personal, social, and recreational interests upon completion of grades ten through twelve.

Employer-Related Goals. Each cooperating employer will:

1. Identify and provide a resource person in their employ to work directly with EBCE students.

2. Provide direct assistance, through the resource person, to help students to satisfactorily complete EBCE activities at their sites.

3. Provide interested students with motivation and specific ways to expand and/or gain knowledge for becoming qualified in a career area.

4. Have a positive attitude toward their role and a sense of greater responsibility in the education of today's youth.

5. A specific group of employers (a consortium) will agree to manage a segment of a career education program during the 1972-73 academic year.

Parent Related Goals. Parents of participating youth will have a positive attitude toward the AEL/EBCE program.

Additional program development goals stated near the beginning of the program year required the production of certain descriptive documents. Their production was later postponed through agreement with the National Institute of Education. The consensus was that documents descriptive of the operation of EBCE should be produced after the program had attained stabilization.

Program Operation and Costs

Program costs for FY 73 were accounted for on a line item basis. It was therefore not feasible to obtain a cost analysis by program function. A major cost analysis effort is planned for FY 74. Although a cost analysis was not accomplished, it is possible to report on the people resources needed to operate the program.

There were 44 students in the program the last half of the year. A total of five full time professionals were used to interact directly with students. One professional worked full time as a counselor and school liaison person;

one professional worked full time identifying and making necessary arrangements with employer sites for students; and one professional worked full time as an operations manager. Two non-professional staff members worked full time at clerical and transportation duties.

Replication Concerns

Transportation. Parents' greatest concern was the transportation problem. There was an extensive amount of transportation required in the EBCE program, and public transportation was not readily available at all times to all necessary places in the geographical area served by the program. Transportation may or may not be a major problem in some other metropolitan area.

Cost Per Student. There was considerable evidence from observing EBCE staff that they were working full time with a small number of students. A good deal of efficiency must be gained if the program is to become a bonafide alternative to public school education.

Site Coordination. The tracking of students as they move all over the metropolitan area and the possible overloading of employees as the number of students and EBCE staff increase could present a major replication problem. Ths logistics and coordination efforts needed may or may not be a major problem if a much larger number of students become involved with the program.

Translation of Student Work into Academic Credit. In most senior high schools, academic credit is determined primarily by the Carnegie unit method which is based upon the amount of classroom time involved and by a comparison of effort with some common outcome measures. The EBCE program is burdened with the task of trying to convert an entirely different individualized and personalized approach into the conventional type of academic credit so that students can graduate from high schools. This problem will be more acute if the program expands downward into the 10th and 11th grades.

Methodology

The methodology section of this report is a description of the participants in the AEL/EBCE program and of the instrumentation and other evaluation procedures that were used to determine if program objectives were met.

Subjects

At least two different groups of individuals might be considered "subjects" in a desired sense. In addition to the students, attainment of program objectives required that certain changes take place in employers. These changes may be considered a program effect.

Students

Students were recruited from the 12th grade class of the Kanawha County Schools in and near Charleston, West Virginia. Students volunteering to be participants in the EBCE program came from the following high schools: Charleston High (7), Dunbar High(8), George Washington High (6), Herbert Hoover High (1), Nitro High (5), and Stonewall Jackson High (17).

Twenty-two students were selected to begin the EBCE program in September, 1972. One of these 22 students returned to his previous high school after two days. The one dropout gave two reasons for withdrawal from the program: (1) the proximity of the home high school (across the street from the student's residence) and (2) a desire to participate in the home school activities. The remaining 21 students who entered the program in September of 1972 and completed the program in June of 1973 will be identified as Group I throughout this report.

Twenty-three students were selected to enter the EBCE program during the second semester of their senior year, and all 23 remained with the program until June. This group, who entered in January of 1973, will be identified as Group II throughout this report.

The following set of criteria used to select the 44 students give an indication of the type of students who participated in the program. The criteria were:

1. The students should be eligible for enrollment in the Kanawha County school system.
2. Enrollees should be within one year of completing their high school diploma.
3. They should have specific course requirements that could be fulfilled within the time they would be in the EBCE program.
4. Participants should volunteer, and have their parents' consent.
5. There should be a compatibility of expressed career interests on the part of students with program capability to meet those interests.
6. Students should be willing to participate in work activities that would not conflict with the program.
7. The students should be able to provide transportation to and from the EBCE site.
8. Participants should possess no major health and adjustment barriers as revealed by appropriate examination.
9. Students should have been enrolled in regular classes all of the preceding semester.
10. The students must not be under suspension or threat of suspension by any school system.
11. They should not have commitments which would interfere with involvement in the EBCE program (e.g., band, athletics, etc.).
12. As a group, the students should reflect a broad range of ability and socio-economic levels.
13. The students should meet other criteria not in conflict with the above but required to fulfill the program mandate.

The 44 students who participated in the EBCE program represented a wide range of academic ability and career interests. For example, the enrollees included two Merit Scholarship finalists as well as students with limited academic abilities. The first group of 21 students (Group I) which was in the

program the entire school year needed an average of 2.69 credits to graduate. One credit is equivalent to one year of work in an academic subject. Twenty-three Group II students who were in the program for only the second semester needed an average of 1.22 credits to graduate. Table 1 is a representation of the average number of credits needed and earned for each group as well as a listing of the number of students needing credit in identified academic areas and the number of students receiving such credit.

There were 4 girls and 17 boys in the first group of students, and Group II contained 13 girls and 10 boys. Six of the 44 students were black (three from each group), whereas 38 of the 44 students were white.

The grade point average for Group I students prior to entering the EBCE program was 1.99; whereas the grade point average for the Group II students was 2.45. Grade point average was determined by assigning the number 4 for an A, 3 for a B, 2 for a C, 1 for a D, and 0 for an F. Physical education grades were not used in determining grade point average. Grade point average was calculated by using all grades received from entrance into the 9th grade until entry into the EBCE program.

Reasons why the students volunteered to participate in the program were identified through student interviews conducted during May of 1973. The primary reason given for volunteering for the program was to learn about or try out jobs. Other reasons were to get a break from routine, or they expected to have some independence and self-direction through participating in the EBCE program. Additional information concerning why students volunteered and what they expected from the EBCE program are presented in Technical Report No. 42, Students' Attitudes Toward the Program as Indicated by an Analysis of Interview Data.

Table 1

Credits Needed and Received FY 73

	Group I Students	Group II Students**	Total
English			
Number of Students Needing Credits	19	23	42
Number of Students Receiving Credits	18	23	41
Mathematics			
Number of Students Needing Credits	1	0	1
Number of Students Receiving Credits	7	10	17
Science			
Number of Students Needing Credits	4	0	4
Number of Students Receiving Credits	9	9	18
Social Studies			
Number of Students Needing Credits	6	7	13
Number of Students Receiving Credits	16	16	32
Total Credit*			
Credits Needed per Student	2.69	1.22	
Credits Received per Student	4.77	2.61	

*1.0 credit is equivalent to one year's work in a subject area.

**Group II students entered the program in midyear and therefore were only one-half year from graduation.

A detailed description of 1972-73 EBCE students' background data is presented in Technical Report No. 36, Selected Demographic Data from Students in the 1972-73 School Year.

Employers

A total of 64 employer sites were available for EBCE students during FY 73 (see Appendix B). These employers were selected for the following reasons:

1. To provide students with at least one possibility in each of the 15 career clusters (see Appendix C).
2. To meet individual student needs on occasions requiring some specialized type of employer site.
3. Personal knowledge and contacts, with top executives, by the employer liaison staff person and by various members of the advisory council.

As indicated by Table 2, the 64 employer sites represented a wide cross section of possible sites available throughout Kanawha County. Employer sites were classified (for this report) under two categories--size and public versus private. The large employer sites were those organizations employing 100 or more people; medium employer sites employed 10 to 99 people; and the small employer sites employed less than 10 people.

Table 2

Classification of Employer Sites

	Large	Medium	Small	Total
Private	7	16	16	39
Public	8	11	6	25
Total	15	27	22	64

Treatment

Students

It is necessary, in order to adequately describe the students' educational program, to first describe some roles of various EBCE staff persons. Students were placed into a program staffed by seven to nine professionally trained people. The director of this staff had the title Associate Program Director and was in charge of operations. This was a role that could most clearly be aligned with the principal's role in the traditional high schools. A second staff person was a trained counselor and performed student counseling-type duties and program coordination duties. A third person was primarily responsible for obtaining specific employer sites for students. The remaining professional staff members had one of two distinct titles and roles. The job titles were Program Manager and Instructional Manager. The Program Manager was responsible for planning, coordinating, and monitoring the educational program of seven to ten students. The Program Manager was sometimes a counselor, sometimes a monitor and student critic, and sometimes an enabler for students. The Instructional Manager was a subject matter specialist, and was responsible for identifying, prescribing, and evaluating the personalized subject matter activities for all students who either needed or wanted work in that particular subject area. In essence, the Instructional Manager designed, prescribed, and evaluated a curriculum for each student that participated in that subject area.

Students participated in orientation sessions their first two to three weeks in the EBCE program. The purposes of the orientation period were to acquaint the students with the program procedures, objectives, and rules; acquaint the students with the EBCE staff; and to obtain data from each student on which their program could be built. Students indicated (with

assistance from their home school counselors) how many credits were needed and in which areas in order for them to graduate from their home school. Students also indicated, at this time, the careers in which they were interested and the academic areas of particular interest to them. Students and Instructional Managers jointly prepared a course of study designed to accommodata student needs and interests.

Students were assigned to a specific Program Manager. The student and the Program Manager worked jointly in coordinating and monitoring the adopted course of study. They identified the type and/or the specific employer site which they wanted to explore and study. The employer liaison person made the contacts with the employer and arranged the final details of the visit. Students met with the individual Instructional Managers, which had been identified in their course of study, at least one or two times each week. These meetings were individual appointments and were used to discuss the student's specific activities, to evaluate the student's activities, and to identify and develop the next specific activity in that particular academic area.

Students usually were at employer sites three out of five days each week. The remaining time was usually scheduled with Program and Instructional Managers at the learning center.

Employers

The AEL/EBCE employer liaison person was the primary contact between the EBCE program and employers. The employer sites were first contacted through the top executive by the employer liaison person. It was through this meeting that the EBCE program was able to determine if that employer site could or could not be utilized by the EBCE students. If the top executive agreed to

cooperate with the EBCE program, an employer contact person was identified and certain employer site specific ground rules identified. The employer contact person was frequently a middle management person in the organization and was given responsibility to coordinate student requests with the EBCE employer liaison person. The employer contact person identified a specific employer resource person after receiving a formal request. The student interacted and maintained close liaison with this resource person during his or her tenure at the employer site. In a formal sense, the identified contacts at a site are the top executive, employer contact person, and the employer resource person. This, however, varied with the size of the employer site since a small or sometimes medium-sized employer site might require two or sometimes all three roles to be filled by the same person.

Instrumentation

Instruments were primarily identified or designed to assess program impact. The following instruments were administered during FY 73.

1. The Iowa Tests of Educational Development (ITED) was given to all EBCE students. The ITED is an achievement test battery which has norms for grades 9, 10, 11, and 12. The battery consists of subtest scores in reading, language arts, mathematics, social studies background, science background, use of sources, and a composite score.
2. The Career Development Inventory (CDI) was administered to all EBCE students. The CDI is an instrument developed by Donald E. Super and David J. Forrest of Columbia University to measure various aspects of career maturity. The instrument yields subscores in: (a) Planning Orientation which

represents the degree to which the student is able to use information in planning; (b) Resources for Exploration which is a self-rated assessment of the used and available resources for use in planning for a career; and (c) Information and Decision-Making, a cognitive measure of a sample of the amount of educational and occupational information the student has acquired along with his mastery of the use of information for sound decisions.

3. An AEL-developed Semantic Differential was administered to all EBCE students. The Semantic Differential is an instrument designed to measure the psychological meaning which people have of various concepts. Kerlinger[1] refers to the use of a semantic differential to study attitudes people have toward certain concepts at a specific time. The AEL semantic differential was designed to measure the attitude and possible change in attitude of the EBCE students on the following concepts: chances for success in life, future career plans, responsibility to the governance of the community, education, themselves, recreation facilities available in the community, social contributions of the community to their well-being, occupations, and their contributions to their community. A copy of the AEL/EBCE semantic differential is included as Appendix D.
4. The Kuder Occupational Interest Survey (KOIS) Form DD was administered to all EBCE students. The Kuder is a

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[1]Fred N. Kerlinger. Foundations of Behavioral Research. (New York: Holt, Rinehart and Winston, Inc., 1967).

standardized instrument designed to provide information to students about their occupational interest patterns.

5. The Student Information System Questionnaire (Level II) was administered to all EBCE students. The SIS questionnaire was developed to generate data from students concerning their interests, attitudes, and plans. Seven subtest scales were utilized in the FY 73 evaluation efforts. The names assigned to these scales are: (1) cognitive skills, (2) learning attitudes, (3) psychomotor creativity, (4) personal adjustment, (5) maturity, (6) social adjustment, and (7) flexibility. The SIS questionnaire was also used in providing student demographic data. A detailed description of the SIS questionnaire and results are available in Technical Report No. 41, Analysis of Data from the Student Information System.
6. Activity Sheets were used by Program Managers, Instructional Managers, and by students. The activity sheet (see Appendix E) was primarily used to present a precise and specific learning activity to an individual student. The activity sheet was to contain information about the specific objective, the amount of time needed to complete the activity, specific details and resources available on the activity, and closing comments and assessment of the activity by both the student and the Instructional Manager. Specific details and report of the activity sheets are available in Technical Report No. 44, An Investigation of the Use of Student Activity Sheets.
7. A structured interview was administered to all students at the end of the program year. The student interview was primarily

structured to obtain information about students' attitudes toward the EBCE program, their career plans, the effect of EBCE on the students, and students' recommendations for further development. A copy of the Student Interview Schedule is included as Appendix F.

8. Parents of the EBCE students were interviewed after the students had graduated from the program. The primary purpose of the parent interview was to obtain parents' attitudes toward the EBCE program and their perception of the effect of the EBCE program on their sons and daughters. A copy of the parent interview schedule is attached as Appendix G.

Design

EBCE students were administered the Iowa Tests of Educational Development (ITED), the Career Development Inventory (CDI), the AEL/EBCE Semantic Differential, and the Kuder Occupational Interest Survey at entry into the EBCE program and at the end of the academic year. Symbolically, the design for Group I students on each of the above students was O_1 X O_2 X O_3, where O_1 symbolizes the September administration of the above instruments, O_2 the winter administration, O_3 the spring administration, and the X symbolizes an intervening treatment period. The symbolic design for Group II on each of the above instruments (using the same symbol interpretation) was O_2 X O_3. A Student Information System Questionnaire (SIS) was administered to all students in the winter administration period and in the spring administration. Students were interviewed about various aspects of the program at least four times during the year; however, a structured interview was administered only at the end of the academic year.

All parents were given a questionnaire designed to provide their reactions of and attitudes toward the EBCE program after the first nine weeks of the program. A sample of parents (33% of the parents) were interviewed via telephone near the end of the first semester of the program. This interview was designed to ascertain attitudes toward the program and especially to get their reaction to a particular EBCE form that was being developed. Efforts were made to contact and interview all parents after the close of the school year. Interviews were conducted with one or more parents in 31 of the 44 (70%) possible families.

Results

Students

Academic Achievement

The Iowa Tests of Educational Development (ITED) were administered to all students to determine whether EBCE students demonstrated normal academic growth. All students were given Form X5 of the ITED as a pretest and Form Y5 of the ITED as a post-test. There was a span of approximately eight months between testing for the first group of students (Group I) and a span of approximately three and one-half months between testing for the second group of students (Group II). Group I students were also administered Form X5 of the ITED in February (and at the same time as the pretest for Group II).

Student scores were converted to growth scores according to a procedure based on Thurstone's absolute scaling procedures[1] so that an indication of student growth rate could be obtained. A student's growth rate score was obtained by subtracting the pretest growth score from the post-test growth

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[1] Science Research Associates. SRA Assessment Survey, 1971 Growth Scale Curves, No. 18-145. (Chicago: SRA, April, 1972) (mimeographed) citing Harold Gulliksen. Theory of Mental Tests. (New York, 1950, pp. 284-186).

score. Since growth rate score norms for 12th grade students were not available, an approximation of these norms was developed from 12th grade October and May growth score norms. The approximation for a 12th grade growth rate score was obtained by subtracting the October growth score mean from the May growth score mean (from national norms[1]).

Growth rate scores for Group I of the EBCE program and the approximate growth rate means are presented in Table 3.

Table 3

Comparison of Growth Rate of EBCE Group 1 Students[1] with National Norms

	Comp.	Reading	Language[2] Arts	Mathematics	Social Studies	Science	Use of Sources
$x_2 - x_1$	12.10	2.24	17.91	13.71	16.81	7.38	0
$\mu_M - \mu_O$*	8	6	7	2	7	4	5

*Growth Score Means from National First Semester Norms of 12th grade students (μ_O) and of 12th grade second semester norms (μ_M).

[1]This is a comparison of the Group I EBCE students with national norms only since the Group II EBCE students were in the program less than one full semester.

[2]There was a significantly greater growth in language arts ($p<.10$).

A statistically greater than expected growth rate ($p<.10$) was found in the Language Arts subtests for Group I. Although not statistically significant, greater than expected growth rates were observed in mathematics, social studies, science, and in the composite scores. A small growth was indicated in reading, and no growth was demonstrated in the Use of Sources subtest.

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[1]Ibid.

Since the period of time between pretest and post-test of the second group of students was only three and one-half months, meaningful growth rate comparisons are difficult to make. It would appear, however, the growth can be observed from the language arts subtest. An analysis of growth scores of all students for all testing periods indicated the greatest growth in all subtests was during the first semester and there was a slight decrease in scores the second semester (see Table 4).

An analysis of February scores of both groups of students indicated no significant differences between the two groups of any of the subtests. This observation was noticeable particularly since there was substantial differences between the two groups in grade point averages. As mentioned previously, Group I had a GPA of 1.99 prior to entering the program, whereas Group II had a GPA of 2.45 prior to entry into the program.

Both groups of students scored below the national norms on all except the mathematics subtest. The mathematics subtest scores were greater than the national norm ($p<.0001$).

A detailed discussion and analysis of the ITED is available from Technical Report No. 38, Analysis of Scores on the Iowa Tests of Educational Development.

A second indication of academic achievement can be obtained by comparing student credit needs for graduation with credit received while in the EBCE program. It can be observed from the data of Table 1, page 10, that students received almost two times the number of credits they needed for graduation while in the EBCE program. All but two students needed credit in communication skills (English) and all but one of those students received the credit needed and that credit was received during the summer. One student needed credit in mathematics and 17 students received credit. Four students needed credit in science, whereas 18 students received credit, and thirteen students needed some

Table 4

Mean Growth Scores and Standard Deviation by ITED Subtests and Testing Period

	Group I						Group II			
	Autumn '72		Winter '73		Spring '73		Winter '73		Spring '73	
	$\bar{x}$	S	$\bar{x}$	S	$\bar{x}$	S	$\bar{x}$	S	$\bar{x}$	S
Composite	496.61	78.54	509.33	77.90	508.71	83.09	522.17	86.60	518.00	83.25
Reading	420.05	78.65	436.14	78.07	422.29	67.55	442.52	71.41	432.70	71.93
Language	399.90	61.88	411.62	61.04	417.81	71.78	429.43	71.29	430.04	68.65
Math	554.81	82.09	567.62	89.60	568.52	101.08	562.91	121.95	562.74	113.81
Social Studies	457.57	85.04	478.24	87.47	474.38	76.62	474.65	96.64	470.96	85.41
Science	401.05	76.92	423.76	75.15	408.43	78.59	421.48	60.54	413.04	68.85
Use of Resources	427.14	70.11	435.86	75.81	427.14	78.12	457.13	74.10	458.91	93.13

credit in social studies but 32 students received academic credit. This is evidence that the students did participate in academic study beyond what was needed "to get by".

A sample of second semester student activity sheets was reviewed and critiqued by evaluators from outside the Laboratory. The evaluators concluded that there was considerable evidence of individualization of student academic activities and that imagination was used in developing the student activities. However, the evaluators reported considerable evidence of a lack of orderly sequencing of student activities within an academic area. A detailed report and analysis of student activity sheets is available in Technical Report No. 44, An Investigation of the Use of Student Activity Sheets.

As reported in the student interviews, nearly 30% of the students said they worked harder in the EBCE program than they did in their home school, and only approximately 14% of the students felt they worked harder in their home school. Approximately one-half of the students believed they learned more in the EBCE program than they did in the home school, and less than 5% of the students felt they learned more in the home school. Some of the reasons given by students to support their positive attitude toward the EBCE program were: the activities were more interesting; they could work the activities at their own speed; and in the home school they just sat in the class every day. A detailed description of an analysis of student interview data can be found in Technical Report No. 42, Students' Attitudes Toward the Program as Indicated by an Analysis of Interview Data.

Parents were asked the following question in an interview: "Do you believe your child learned as much in his/her subject areas this year as compared to last year?" Of those parents interviewed, more than 61% did believe the students learned more from the EBCE program, approximately 22% felt there was no difference, and less than 4% (one parent) felt that the home school was superior to

the EBCE program. A detailed description of parent interview data can be found in Technical Report No. 43, Parents' Attitudes Toward the Program as Indicated by an Analysis of Interview Data.

Scores were analyzed from the Student Information System Questionnaire II (SIS) on cognitive skills and on learning attitudes. The cognitive skills score is a measure of basic learning aptitudes. General comprehension, reading, speaking, and general learning skills are included in this scale. The learning attitudes scale is an indication of the student's attitude toward the learning skills of concentration, organization, dependability, and willingness. Students were given the SIS in February and in May, and it is therefore difficult to comment on gains or losses made over that short span of time. The second group of students did score higher than the first group in learning attitude. The second group scored approximately at the norm on the learning attitude scale whereas the first group scored significantly below the norm ($p<.01$). Both groups scored significantly below the norm on the cognitive skills scale ($p<.05$) as indicated in Table 5. A detailed discussion of the SIS analysis can be found in Technical Report No. 41, Analysis of Data from the Student Information System.

Table 5

Mean Scores on the Cognitive Skills and Learning Attitude Scales of the Student Information System by Student Group and Testing Period

SIS Scale	Group I		Group II	
	Winter	Spring	Winter	Spring
Cognitive Skills*	49.10	45.70	45.60	43.80
Learning Attitude*	42.45	43.35	51.10	52.50

*The norm on all tests is 50.

Career Maturity

An important objective of the EBCE program is to prepare students to make career decisions and to develop certain skills needed to enter the career. Career maturity in this report will include concepts such as making realistic career choices, knowledge of the world of work, problem-solving skills, planning skills, decision-making skills, and career attitudes.

The Career Decision Inventory (CDI) was administered to all students as a pretest and as a post-test. The CDI was designed to measure three aspects of career maturity: Scale A, development of a planning orientation toward a career; Scale B, familiarity with and use of the resources which can be helpful in vocational exploration; and Scale C, knowledge of occupations and of career decision-making principles.

The means and standard deviations on the three subtests and the total score for the two groups of students are presented in Table 6. Significant gains from the September testing were made by Group I on Scale A in February and in May. Group II had a positive gain; however, it was not a statistically significant gain. Group I had a significant positive gain on Scale B in February. Both groups had a slight loss (non-significant) on Scale B in May. Group I had a slight loss on Scale C in February and a slight gain in May. Group II had a statistically significant loss on Scale C in May. Group I had gains on all subscales from the September administration to the May testing with largest gains appearing by February. Group II had overall losses in two of the scales and a gain in only one.

There appears to be a comparatively large gain in the February testing and a failure to sustain the growth rate through the May testing period.

A detailed discussion of the administration and analysis of the Career Development Inventory can be found in Technical Report No. 37, Analysis of Scores on the Career Development Inventory.

Table 6

Subtest and Total Means and Standard Deviations on the Career Development Inventory by Group and Month of Testing

Scale	Sept.		Feb.		May	
	Mean	SD	Mean	SD	Mean	SD
Part A						
Group I	99.10	20.46	117.52	17.46	119.10	20.27
Group II	-	-	103.43	17.73	108.00	19.19
Part B						
Group I	255.76	53.03	271.43	54.31	263.57	60.75
Group II	-	-	259.83	54.10	251.30	65.08
Part C						
Group I	19.29	4.86	19.19	5.20	19.81	5.67
Group II	-	-	20.09	5.28	18.52	6.14
Total						
Group I	374.14	65.67	408.14	64.86	402.48	78.50
Group II	-	-	383.35	63.77	377.39	76.51

Students were queried about their career plans in the final student interview. Twenty-seven of the 44 students (over 61%) reported firm career choices, another 18% had not made a choice but had narrowed their interest field down by elimination, and another 20% either did not respond, had not made a choice, or had not narrowed down the field of interest. In every case, they reported that the EBCE program had influenced their career decisions. When asked what they (the students) had specifically gained from the EBCE program, at least 49% of the responses were related to occupational information or job-related skills.

There was strong evidence from the student interviews that students were making realistic career choices. All of the students who planned to enter fields for which advanced training is required were planning to go on to seek

such training, and those who were going into fields in which training is not needed were not planning on acquiring any further education.[1]

Parents of the EBCE students were asked what the advantages of the EBCE program were over the home school. Although there were a variety of responses given, at least 42% believed it was the job information the students had received. A second question was asked to find out how the program had affected their child's career plans. Eighteen parents (58% of the respondents) reported that their child was more certain of a career choice, 25% reported no change, and 7% said the child was less sure of a career choice.

Attitude Toward EBCE

Students were interviewed at least four times during the school year in efforts designed to improve the EBCE program. In each case, attempts were made to determine the students' attitudes toward the EBCE program. In every interview period the students were very strong in attitude toward the EBCE program. At the end of the school year, the students were asked if they would participate in the EBCE program again knowing what they now knew. The response was an overwhelming "yes" with 42 answering "yes" with no reservations, one answering "yes" with reservations, and one answering "no". At least 90% of the students felt the program had met or exceeded their expectations. A small number of the students said they did not have as much independence in the program as they thought they would have.

Parents were asked how they perceived the student's attitude toward EBCE compared with the attitude toward the home school. Over 96% of the parents

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[1]John T. Seyfarth, James H. Sanders, and Charles L. Bertram. Students' Attitudes Toward the Program as Indicated by an Analysis of Interview Data. (Charleston, W. Va.: Appalachia Educational Laboratory, Inc.), September, 1973, p. 23.

were convinced that their son or daughter was much more positive toward the EBCE program than they were the home school. One parent felt their child was more positive toward the home school than the EBCE program.

Miscellaneous Student Indicators

Some parents and some of the students had indicated that a number of the students would not have survived the entire year at their home school. There were indications from some that they would have dropped out of school. All students who entered the EBCE program (with the exception of the one student who went back to the home school after three days) completed the program.

Student attendance records were examined for FY 72 and FY 73. Although records were available for all students, the attendance records for the Group II students for FY 72 were not consistent. The Group I students were absent from their conventional high school an average of 15.52 days during FY 72. The same group of students was absent from the EBCE program an average of 12.36 days during FY 73.

Data from the Student Information System (SIS) Questionnaire were analyzed over seven different scales, two of which have already been reported. As mentioned previously, it is difficult to make many conclusions about the effect of the program on these scales since the time between testing was only three and one-half months. It is, however, appropriate to compare scores with established norms. Scores for both groups of students, on the five remaining scales are presented in Table 7. The norm to which all scores can be compared is a score of 50 on each scale. Both groups of students scored below the norm in personal adjustment, maturity, social adjustment, and in flexibility ($p<.001$). Students scored at or above the norm on psychomotor creativity. A detailed report of the analysis of the SIS can be found in Technical Report No. 41, Analysis of Data from the Student Information System.

Table 7

Mean Scores on Five Scales of the Student Information System According to Student Group and Testing Period

SIS Scale	Group I		Group II	
	Winter	Spring	Winter	Spring
Psychomotor Creativity	55.00	52.80	49.60	49.85
Personal Adjustment	28.45	29.70	25.40	29.35
Maturity	26.25	28.15	16.95	20.35
Social Adjustment	29.50	30.00	28.70	28.20
Flexibility	42.20	42.10	39.30	41.50

A semantic differential was developed to identify the attitudes of students over several concepts. Data from the semantic differential were analyzed to determine differences and similarities between groups, change in attitude toward concepts during the year, and a comparison of attitudes between concepts. There were no significant differences between groups over any of the concepts. The students were most positive on the following concepts: My chances for success in life are; My future career plans are; and Education is. Students were least positive on the concepts dealing with their community. Although analysis of the data on the semantic differential is not quite complete, it appears that the length of time in the program did positively affect the strength of the feelings. The first group of students consistently rated the concepts higher than the second group. A detailed report on the analysis of the semantic differential is available in Technical Report No. 39, Changes in Students' Attitudes as Measured by a Semantic Differential Instrument.

The Kuder Occupational Interest Survey was administered to all students as a pretest and as a post-test. The analysis of the data indicates that

the number of interests for boys and girls remained stable between entrance into the program and completion of the program. Few significant differences could be found from a comparison of groups or over time periods. A detailed report on the analysis of the Kuder can be found in Technical Report No. 40, An Investigation of Students' Scores on the Kuder Occupational Interest Survey as an Indicator of Program Outcomes.

Parents

A questionnaire (see Appendix H) was given to each set of EBCE parents at the end of the first quarter of the school year. Fourteen (66%) of the parents returned the questionnaire. Of those returning the questionnaire, all parents indicated the EBCE program was better than (12 of 14) or as good as (2 of 14) the educational programs from past years.

A small random sample of parents were interviewed over the telephone by the evaluator at the close of the first semester. Although the purpose of the interview was to get parental opinion on an EBCE program instrument, all parents volunteered their appreciation and continued support of the EBCE program.

As mentioned earlier in this report, parents were contacted again at the close of the school year and arrangements were made for an end-of-year parent interview. The interviews were conducted by Program Managers upon completion of two half-day training sessions. The interviews were arranged with 31 of the 44 parents. Some of the questions and responses of this interview pertained to parents' attitudes toward the EBCE program. They were:

Question 1: How did the Career Education Program in which your child participated compare with his/her educational program from past years?

Response: Twenty-seven of the 31 parents interviewed (87%) rated the EBCE program better. One parent rated the EBCE program about the same and one parent rated the previous program better than the EBCE program.

Question 9: Knowing what they knew now, would they still want their child to participate in EBCE?

Response: Twenty-seven of the 31 parents interviewed (87%) would still want their son or daughter to participate.

Question 10: Would they want a younger son or daughter to participate in EBCE?

Response: Twenty-six of the parents (84%) would want their younger son or daughter to participate in the EBCE program. A detailed description and analysis of the parent interview can be found in Technical Report No. 43, Parents' Attitudes Toward the Program as Indicated by an Analysis of Interview Data.

Employers

Although program staff interacted with employers regularly and frequently, a direct and structured evaluation of employer attitude toward the EBCE program was not accomplished. There is, however, data and evidence available to present some information on employer attitude. A large portion of the available data was derived from an interview of the employer liaison person of AEL.

A total of 69 employers was requested during the year to actively participate in the EBCE program. Of the 69 employers contacted, 64 agreed to cooperate, two employers refused to cooperate, one employer indicated reorganization problems and wished to delay participation, one employer agreed to participate and then withdrew before the school year started, and one employer participated initially and then withdrew because of an internal struggle.

There are many instances which can be cited of positive interaction of employers and EBCE students. An oral surgeon was willing to start at 7:00 a.m. and allow a student to observe surgery, and one employer indicated a change in hiring policy from one of not hiring inexperienced youth to one of looking for youthful applicants. The latter employer indicated his success with EBCE students as a reason for this change in policy, and a number of employers did hire some of the graduates of the EBCE program as a result of their interaction during the year. A small number of employes indicated that the students performed some of the activities (particularly research type activities) as well as some of their staff, and one of the employers indicated the students had done significant research for their organization. There was some evidence that a very small number of employer sites had become more positive in their attitude toward hiring women and blacks, and as of September 1, 1973, there were indications that all who had participated in the program in FY 73 were willing to participate again.

A number of instances can be identified as troublesome areas. In spite of specific dress code information by some employers, a few students did not comply. Approximately 10% of the students abused scheduled appointments during the year; however, there were indications that this improved near the end of the year. Minor conduct violations caused a few of the employers some concern.

Summary and Conclusions

In June of 1973, the Appalachia Educational Laboratory (AEL) completed the first year of development and testing of the EBCE program. Twenty-one students participated in the program the entire year (Group I) and 23 more students participated in the program from Janaury through May of 1973

(Group II). Data from these 44 students were gathered and analyzed throughout the academic year.

Although data, other than national norms, were not available to enable comparisons of the EBCE program with other educational programs, several tentative conclusions are possible. These conclusions are preliminary statements of the degree to which program objectives were reached. The program goals are stated here with a brief discussion of the conclusions reached based on the 1972-73 evaluation results.

Goal: Students will make a realistic career choice based on abilities, interests, and values and the requirements of selected career choices.

Conclusion: Although direct objective data were not available, data from Student Interviews and from the Career Development Inventory would indicate that a majority of the students were making realistic career choices.

Goal: Students will increase their knowledge of the variety of opportunities in the world of work.

Conclusion: Data from the student and parent interviews provide strong indications that EBCE students did become more knowledgeable of the variety of opportunities available to them in the world of work during the EBCE program. This claim was not substantiated by the results obtained from the Knowledge subtest of the CDI.

Goal: Students will identify the functional, adaptive, and specific skills required for selected work situations of their choice.

Conclusion: Although there was considerable program emphasis on this goal, available resources did not permit a systematic evaluation of the achievement of this goal.

Goal: Students will develop acceptable problem-solving, planning, and decision-making skills.

Conclusion: The Career Development Inventory was used to measure achievement of this goal, and the results were mixed. Group I had statistically significant gains in Part A (Planning Orientation), Part B (Resources for Exploration), and demonstrated growth (not statistically significant) on Part C (Information and Decision Making). Group II had a slight gain on Part A (non-significant), a loss on Part B, and a significant loss on Part C. Group I students tended to demonstrate greater gains during the first part of the year than during the latter part of the year. It is important to note that Group II obtained a different pattern of results than either the first or second term Group I results.

Goal: Students will document their ~~educational~~ needs in relation to their career and/or academic goals.

Conclusion: There is positive evidence from examination of the Student Activity Sheets and verification from the student and parent interviews that each student had an individualized and personalized program.

Goal: Students will have the skills and education necessary (including communication skills) to enter his career area or will be able to pursue the career at a higher educational level.

Conclusion: A comparison with national norms indicated that students who participated in the EBCE program the full year demonstrated academic growth at least as great as that which could be expected from students in conventional school settings. There was significant evidence that the EBCE students grew more than expected according to comparisons with national norms in the areas of language arts and mathematics. The EBCE students again tended to demonstrate greatest gains during the first semester and small gains or regression between midyear and end-of-year testing.

Goal: Students will develop their abilities, interests, and values within the context of selected career areas....

Conclusion: When compared with national norms, students demonstrated expected academic growth on the Iowa Tests of Educational Development. Parents and students both volunteered the opinion that the most valuable aspect of the program was the amount of knowledge the students had gained about selected careers through the EBCE program.

Goal: Students will identify, critically examine, and evaluate his/her value system against encountered views on social issues.

Conclusions: Although there is evidence that a few students exerted a great deal of effort in this area, there was no systematic collection of data to indicate if this goal was achieved.

Goal: Students will identify the opportunities in the community and in the world of work for fulfilling personal, social, and recreational interests.

Conclusion: Students who had participated in the EBCE program for the full year demonstrated a significant positive change in attitude on the semantic differential concepts dealing with the community. Student interviews indicated that they felt the job placements had contributed to fulfilling personal career interests. However, analysis of data from the Student Information System Questionnaire revealed that the EBCE students were significantly below national norms on the Social and Personal Adjustment Scales, both at entrance and exit from the program.

Goal: Each cooperating employer will identify and provide a resource person to work directly with EBCE students, provide direct assistance to help students complete EBCE activities, and provide interested students with motivation....for becoming qualified in a career area.

Conclusion: Evidence from the EBCE employer liaison person indicated that the employers who were requested did provide resource persons who assisted students very capably. Student interviews tended to substantiate this conclusion.

Goal: Employers who have participated with EBCE students will have a more positive attitude toward their role and a sense of greater responsibility in the education of today's youth.

Conclusion: All employers who participated in the EBCE program in FY 73 have expressed an intention to participate again during FY 74. Unsolicited statements from a few employers indicate a positive attitude toward the program.

Goal: Parents of participating youth will have a positive attitude toward the AEL/EBCE program.

Conclusion: There is evidence from the interviews that parents were very positive toward the EBCE program. For example, 26 of 31 parents indicated that they would want a younger sibling to participate in the program.

Conclusion: Students expressed very positive attitudes toward the EBCE program during student interviews.

Discussion

A review and analysis of data received from students present evidence of several phenomenon of special concern. In many instances, scores became much higher and more positive by midyear testing and tended to remain stable or regress by the end of the year. There are several reasons why this might have happened. Regardless of program type, seniors seem to take academic endeavors and especially tests less seriously in May when they have completed nearly all their scheduled activities. Also, there is some evidence that the treatment was somewhat different the second part of the year than during the first half.

Empirical evidence to support this concern is especially noticeable in the results of the Career Development Inventory analysis. A third possible reason for the lack of second semester gains is that there were only 75 days allotted to the second semester compared with 98 days for the first semester. The program staff may wish to encourage additional activities designed to keep students working at optimum levels throughout the entire year.

Although a cost analysis of the EBCE program was not completed, there is some concern that the operations staff will have difficulty in reaching their FY cost ratio goal of $2,000 per student. Their success in meeting this goal will be ascertained through the FY 74 cost analysis study, but preliminary indications are that the program had many positive accomplishments but was also expensive.

There was a large amount of data collected on the EBCE students which was indicative of program success. However, without adequate data for comparison with other programs, only tentative conclusions can be made. It would seem particularly useful to have controlled end-of-year comparisons when senior responses to tests are somewhat uneven at best.

A large amount of useful subjective data were collected from students and parents. More carefully designed schema for obtaining data from employers, staff, and on costs would provide more definitive insights into the successes and failures of the EBCE program. A multivariate model for data analysis which would simultaneously utilize data from several sources might provide additional insights into program successes and failures.

Appendix A

Number, Title, and Authors of FY73 EBCE Evaluation Reports

Number, Title, and Authors of FY73 EBCE Evaluation Reports

No.	Title
	Employer-Based Career Education: Evaluation Summary, 1972-73 by Dr. James H. Sanders and Dr. Charles L. Bertram
36	Employer-Based Career Education: Selected Demographic Data from Students in the 1972-73 School Year by Dr. John T. Seyfarth, Dr. James H. Sanders, and Dr. Charles L. Bertram
37	Employer-Based Career Education: Analysis of Scores on the Career Development Inventory by Dr. John T. Seyfarth, Dr. James H. Sanders, and Dr. Charles L. Bertram
38	Employer-Based Career Education: Analysis of Scores on the Iowa Tests of Educational Development by Dr. James T. Ranson, Dr. James H. Sanders, and Dr. Charles L. Bertram
39	Employer-Based Career Education: Changes in Students' Attitudes as Measured by a Semantic Differential Instrument by Dr. James T. Ranson, Dr. James H. Sanders, and Dr. Charles L. Bertram
40	Employer-Based Career Education: An Investigation of Students' Scores on the Kuder Occupational Interest Survey as an Indicator of Program Outcomes by Dr. Ermel Stepp, Dr. James H. Sanders, and Dr. Charles L. Bertram
41	Employer-Based Career Education: Analysis of Data from the Student Information System by Dr. James T. Ranson, Dr. James H. Sanders, and Dr. Charles L. Bertram
42	Employer-Based Career Education: Students' Attitudes Toward the Program as Indicated by an Analysis of Interview Data by Dr. John T. Seyfarth, Dr. James H. Sanders, and Dr. Charles L. Bertram
43	Employer-Based Career Education: Parents' Attitudes Toward the Program as Indicated by an Analysis of Interview Data by Dr. John T. Seyfarth, Dr. James H. Sanders, and Dr. Charles L. Bertram
44	Employer-Based Career Education: An Investigation of the Use of Student Activity Sheets by Dr. John T. Seyfarth, Dr. Richard F. Meckley, Dr. James H. Sanders, and Dr. Charles L. Bertram

Appendix B

Numbers of Students Placed at Employer Sites 1972-73

Appalachia Educational Laboratory/Employer-Based Career Education
Numbers of Students Placed at Employer Sites 1972-73

	A	B	C
C. R. Adams, Jr. D.D.S., Oral Surgeon		1	
Appalachia Educational Laboratory, Inc.		4	
Appalachian Research & Defense Fund	27	4	
Bert Wolfe Ford Company	6	4	
Boll Furniture Company		5	1
Brown Electric Co., Inc.	4		
Capitol Cablevision Corporation		4	
Charleston Area Chamber of Commerce		2	
Charleston Art Gallery	6	2	
City of Charleston		19	
City Government		5	
Traffic Control		1	
Fire Department		3	
Police Department		6	
Charleston Daily Mail		1	
Charleston Human Rights Commission		4	
Charleston National Bank Travel Agency	6	6	
C & P Telephone Company	21	6	
Diran Corporation. Real Estate, Law		2	
Dobbins, Fisher & Pittman, Real Estate		1	
Dupont-Crummett Advertising Agency	9	4	1
Electronic Specialty Company		4	
Henry T. Elden Associates, Architect		1	
Embee's Ladies Department Store		1	
Eskew, Smith & Cannon, Wholesale Dry Goods	5	2	
Fas-Check Food Markets			
General Aviation Service		1	
Governor's Commission on Crime & Delinquency	2	2	
Harden & Harden Funeral Home		1	
Holiday Inn (Charleston House)	7	3	
Kanawha County Board of Education		30	
Kanawha County Parks and Recreation		1	

	A	B	C
Kanawha County Court			
Kanawha County Public Library		2	
Kanawha Players		1	
Kanawha State Forest	3	3	
Kanawha Valley Multiple Listing Service	4	1	
Kroger Corporation		3	
Lynch Pharmacy		1	
Mid-Appalachian Environmental Service	13	3	
Mountain Artisans		4	
Penn Mutual Life Insurance Company			
Charles T. Price, Landscape Architect		1	
Shoney's Restaurant	8		
Stone & Thomas Department Store	6	12	
Thomas Memorial Hospital	30	16	
Triangle Community School		2	
Trojan Steel	3		
Union Carbide Corporation		2	
U.S. Marine Corps Recruiting Office		1	
WMUL-TV	8	5	
WTIP-Radio	5	2	
W. Va. Air National Guard	5	6	
W. Va. College of Graduate Studies		3	
W. Va. Council of Churches		1	
W. Va. Department of Agriculture	19	5	
W. Va. Department of Health		3	
W. Va. Department of Mental Health		8	
W. Va. Department of Natural Resources		3	
W. Va. Department of Public Safety	11	6	
W. Va. Human Rights Commission	7	1	
W. Va. Treasurer			
Charles E. Wright, Jr., D.D.S.		1	
YMCA		1	

A - Exposure
B - Exploration
C - Investigation

Appendix C

Employer Site/Cluster Distribution

AEL/EBCE
Employer Sites as of August, 1973

Career Clusters															
1. Business & Office															
2. Marketing & Distribution															
3. Communications & Media															
4. Construction															
5. Manufacturing															
6. Transportation															
7. Ag. & Natural Resources															
8. Environmental Control															
9. Public Service															
10. Health															
11. Hospitality & Recreation															
12. Personal Services															
13. Fine Arts & Humanities															
14. Consumer & Home Making															
15. Research & Technical															

X	C. R. Adams, Jr., D.D.S.
X	Advertising, Inc.
X	Appalachia Educational Laboratory, Inc.
X	Appalachian Research & Defense Fund
X	Bert Wolfe Ford Co.
X	Boll Furniture Company
X	Brown Electric Co., Inc.
X	Capitol Cablevision Corporation
X	Charleston Area Chamber of Commerce
X	Charleston Art Gallery
X	City of Charleston: City Government
X	Traffic Control
X	Fire Department
X	Police Department
X	Charleston Daily Mail
X	Charleston Human Rights Commission
X	Charleston National Bank Travel Agency
X	C & P Telephone Company
X	Diran Corporation
X	Dobbins, Fisher & Pittman, Real Estate
X	Electronic Specialty Company
X	Henry T. Elden Associates
X	Embee's Ladies Department Store
X	Eskew, Smith & Cannon
X	Fas-Chek Food Markets
X	General Aviation Service
X	Governor's Commission on Crime & Delinquency
X	Harden & Harden Funeral Home
X	Holiday Inn (Charleston House)
X	Kanawha County Board of Education
X	Kanawha County Parks and Recreation
X	Kanawha County Court
X	Kanawha County Public Library
X	Kanawha Players
X	Kanawha State Forest
X	Kanawha Valley Multiple Listing Service
X	Kroger
X	Oakwood Pharmacy
X	Mid-Appalachian Environmental Service

AEL/EBCE
Employer Sites as of August, 1973

Career Clusters	Mountain Artisans	Penn Mutual Life Insurance Co.	Charles T. Price Landscape Architect	Shoney's	Stone & Thomas Department Store	Thomas Memorial Hospital	Triangle Community School	Travelmates, Inc.	Trojan Steel	Union Carbide Corporation	U. S. Marine Corps Recruiting Office	WMUL-TV	WTIP-Radio	W. Va. Air National Guard	W. Va. College of Graduate Studies	W. Va. Council of Churches	W. Va. Department of Agriculture	W. Va. Department of Health	W. Va. Department of Mental Health	W. Va. Department of Natural Resources	W. Va. Department of Public Safety	W. Va. Human Rights Commission	W. Va. Treasurer	Charles E. Wright, Jr., D.D.S.	YMCA
1. Business & Office		X			X	X			X	X		X	X		X							X	X	X	
2. Marketing & Distribution	X				X				X																
3. Communications & Media					X						X	X	X												
4. Construction									X					X											
5. Manufacturing	X								X	X															
6. Transportation								X																	
7. Ag. & Natural Resources			X													X	X			X					
8. Environmental Control																X	X			X					
9. Public Service						X	X					X	X			X	X	X	X	X	X	X			
10. Health				X		X								X		X	X	X	X		X	X			
11. Hospitality & Recreation				X				X																	X
12. Personal Services	X	X	X	X		X	X									X		X							
13. Fine Arts & Humanities	X																					X		X	
14. Consumer & Home Making		X		X												X									
15. Research & Technical															X										

Appendix D

Semantic Differential

Name _____ Age _____ Sex _____

DIRECTIONS

1. This survey is to let you describe how you feel or what you think.

2. Show what you think about the concept (phrase) on the top of each page by placing an "X" in one of the seven blanks between each set of adjectives (from very good to very bad).

3. Use only one mark for each pair of adjectives, but each pair should have one mark.

4. There are no right or wrong answers. Your first thought is usually the best one to record.

Example:

Please react to the concept:

ICE CREAM

Good ___ ___ ___ ___ ___ ___ ___ Bad

You might have reacted to the concept ICE CREAM in one of seven ways. The following illustrates the seven different ways you might have marked with an interpretation of each alternative.

Good	___	___	___	___	___	___	___	Bad
Very Good	X	___	___	___	___	___	___	
Moderately Good	___	X	___	___	___	___	___	
Somewhat Good	___	___	X	___	___	___	___	
So-So or Maybe no Meaning	___	___	___	X	___	___	___	
	___	___	___	___	X	___	___	Somewhat Bad
	___	___	___	___	___	X	___	Moderately Bad
	___	___	___	___	___	___	X	Very Bad

MY CHANCES FOR SUCCESS IN LIFE ARE:

wise	___	___	___	___	___	___	___	foolish
valuable	___	___	___	___	___	___	___	worthless
good	___	___	___	___	___	___	___	bad
weak	___	___	___	___	___	___	___	strong
consistent	___	___	___	___	___	___	___	inconsistent
fair	___	___	___	___	___	___	___	unfair
progressive	___	___	___	___	___	___	___	traditional
complete	___	___	___	___	___	___	___	incomplete
meaningful	___	___	___	___	___	___	___	meaningless
successful	___	___	___	___	___	___	___	unsuccessful
unimportant	___	___	___	___	___	___	___	important
discouraging	___	___	___	___	___	___	___	encouraging
interesting	___	___	___	___	___	___	___	boring
hazy	___	___	___	___	___	___	___	clear
dirty	___	___	___	___	___	___	___	clean
relaxed	___	___	___	___	___	___	___	tense
ugly	___	___	___	___	___	___	___	beautiful
sharp	___	___	___	___	___	___	___	dull
weak	___	___	___	___	___	___	___	powerful
colorful	___	___	___	___	___	___	___	colorless

MY FUTURE CAREER PLANS ARE:

wise	___	___	___	___	___	___	___	foolish
valuable	___	___	___	___	___	___	___	worthless
good	___	___	___	___	___	___	___	bad
weak	___	___	___	___	___	___	___	strong
consistent	___	___	___	___	___	___	___	inconsistent
fair	___	___	___	___	___	___	___	unfair
progressive	___	___	___	___	___	___	___	traditional
complete	___	___	___	___	___	___	___	incomplete
meaningful	___	___	___	___	___	___	___	meaningless
successful	___	___	___	___	___	___	___	unsuccessful
unimportant	___	___	___	___	___	___	___	important
discouraging	___	___	___	___	___	___	___	encouraging
interesting	___	___	___	___	___	___	___	boring
hazy	___	___	___	___	___	___	___	clear
dirty	___	___	___	___	___	___	___	clean
relaxed	___	___	___	___	___	___	___	tense
ugly	___	___	___	___	___	___	___	beautiful
sharp	___	___	___	___	___	___	___	dull
weak	___	___	___	___	___	___	___	powerful
colorful	___	___	___	___	___	___	___	colorless

MY RESPONSIBILITY TO THE GOVERNANCE OF MY COMMUNITY IS:

wise	___	___	___	___	___	___	___	foolish
valuable	___	___	___	___	___	___	___	worthless
good	___	___	___	___	___	___	___	bad
weak	___	___	___	___	___	___	___	strong
consistent	___	___	___	___	___	___	___	inconsistent
fair	___	___	___	___	___	___	___	unfair
progressive	___	___	___	___	___	___	___	traditional
complete	___	___	___	___	___	___	___	incomplete
meaningful	___	___	___	___	___	___	___	meaningless
successful	___	___	___	___	___	___	___	unsuccessful
unimportant	___	___	___	___	___	___	___	important
discouraging	___	___	___	___	___	___	___	encouraging
interesting	___	___	___	___	___	___	___	boring
hazy	___	___	___	___	___	___	___	clear
dirty	___	___	___	___	___	___	___	clean
relaxed	___	___	___	___	___	___	___	tense
ugly	___	___	___	___	___	___	___	beautiful
sharp	___	___	___	___	___	___	___	dull
weak	___	___	___	___	___	___	___	powerful
colorful	___	___	___	___	___	___	___	colorless

EDUCATION IS:

wise	___	___	___	___	___	___	___	foolish
valuable	___	___	___	___	___	___	___	worthless
good	___	___	___	___	___	___	___	bad
weak	___	___	___	___	___	___	___	strong
consistent	___	___	___	___	___	___	___	inconsistent
fair	___	___	___	___	___	___	___	unfair
progressive	___	___	___	___	___	___	___	traditional
complete	___	___	___	___	___	___	___	incomplete
meaningful	___	___	___	___	___	___	___	meaningless
successful	___	___	___	___	___	___	___	unsuccessful
unimportant	___	___	___	___	___	___	___	important
discouraging	___	___	___	___	___	___	___	encouraging
interesting	___	___	___	___	___	___	___	boring
hazy	___	___	___	___	___	___	___	clear
dirty	___	___	___	___	___	___	___	clean
relaxed	___	___	___	___	___	___	___	tense
ugly	___	___	___	___	___	___	___	beautiful
sharp	___	___	___	___	___	___	___	dull
weak	___	___	___	___	___	___	___	powerful
colorful	___	___	___	___	___	___	___	colorless

I AM:

wise	___	___	___	___	___	___	___	foolish
valuable	___	___	___	___	___	___	___	worthless
good	___	___	___	___	___	___	___	bad
weak	___	___	___	___	___	___	___	strong
consistent	___	___	___	___	___	___	___	inconsistent
fair	___	___	___	___	___	___	___	unfair
progressive	___	___	___	___	___	___	___	traditional
complete	___	___	___	___	___	___	___	incomplete
meaningful	___	___	___	___	___	___	___	meaningless
successful	___	___	___	___	___	___	___	unsuccessful
unimportant	___	___	___	___	___	___	___	important
discouraging	___	___	___	___	___	___	___	encouraging
interesting	___	___	___	___	___	___	___	boring
hazy	___	___	___	___	___	___	___	clear
dirty	___	___	___	___	___	___	___	clean
relaxed	___	___	___	___	___	___	___	tense
ugly	___	___	___	___	___	___	___	beautiful
sharp	___	___	___	___	___	___	___	dull
weak	___	___	___	___	___	___	___	powerful
colorfu	___	___	___	___	___	___	___	colorless

THE RECREATION FACILITIES AVAILABLE TO ME IN MY COMMUNITY ARE:

wise	___	___	___	___	___	___	___	foolish
valuable	___	___	___	___	___	___	___	worthless
good	___	___	___	___	___	___	___	bad
weak	___	___	___	___	___	___	___	strong
consistent	___	___	___	___	___	___	___	inconsistent
fair	___	___	___	___	___	___	___	unfair
progressive	___	___	___	___	___	___	___	traditional
complete	___	___	___	___	___	___	___	incomplete
meaningful	___	___	___	___	___	___	___	meaningless
successful	___	___	___	___	___	___	___	unsuccessful
unimportant	___	___	___	___	___	___	___	important
discouraging	___	___	___	___	___	___	___	encouraging
interesting	___	___	___	___	___	___	___	boring
hazy	___	___	___	___	___	___	___	clear
dirty	___	___	___	___	___	___	___	clean
relaxed	___	___	___	___	___	___	___	tense
ugly	___	___	___	___	___	___	___	beautiful
sharp	___	___	___	___	___	___	___	dull
weak	___	___	___	___	___	___	___	powerful
colorful	___	___	___	___	___	___	___	colorless

THE SOCIAL CONTRIBUTIONS OF MY COMMUNITY TO MY WELL BEING ARE:

wise	___	___	___	___	___	___	___	foolish
valuable	___	___	___	___	___	___	___	worthless
good	___	___	___	___	___	___	___	bad
weak	___	___	___	___	___	___	___	strong
consistent	___	___	___	___	___	___	___	inconsistent
fair	___	___	___	___	___	___	___	unfair
progressive	___	___	___	___	___	___	___	traditional
complete	___	___	___	___	___	___	___	incomplete
meaningful	___	___	___	___	___	___	___	meaningless
successful	___	___	___	___	___	___	___	unsuccessful
unimportant	___	___	___	___	___	___	___	important
discouraging	___	___	___	___	___	___	___	encouraging
interesting	___	___	___	___	___	___	___	boring
hazy	___	___	___	___	___	___	___	clear
dirty	___	___	___	___	___	___	___	clean
relaxed	___	___	___	___	___	___	___	tense
ugly	___	___	___	___	___	___	___	beautiful
sharp	___	___	___	___	___	___	___	dull
weak	___	___	___	___	___	___	___	powerful
colorful	___	___	___	___	___	___	___	colorless

ALL OCCUPATIONS ARE:

wise	___	___	___	___	___	___	___	foolish
valuable	___	___	___	___	___	___	___	worthless
good	___	___	___	___	___	___	___	bad
weak	___	___	___	___	___	___	___	strong
consistent	___	___	___	___	___	___	___	inconsistent
fair	___	___	___	___	___	___	___	unfair
progressive	___	___	___	___	___	___	___	traditional
complete	___	___	___	___	___	___	___	incomplete
meaningful	___	___	___	___	___	___	___	meaningless
successful	___	___	___	___	___	___	___	unsuccessful
unimportant	___	___	___	___	___	___	___	important
discouraging	___	___	___	___	___	___	___	encouraging
interesting	___	___	___	___	___	___	___	boring
hazy	___	___	___	___	___	___	___	clear
dirty	___	___	___	___	___	___	___	clean
relaxed	___	___	___	___	___	___	___	tense
ugly	___	___	___	___	___	___	___	beautiful
sharp	___	___	___	___	___	___	___	dull
weak	___	___	___	___	___	___	___	powerful
colorful	___	___	___	___	___	___	___	colorless

MY CONTRIBUTIONS TO MY COMMUNITY ARE:

wise	___	___	___	___	___	___	___	foolish
valuable	___	___	___	___	___	___	___	worthless
good	___	___	___	___	___	___	___	bad
weak	___	___	___	___	___	___	___	strong
consistent	___	___	___	___	___	___	___	inconsistent
fair	___	___	___	___	___	___	___	unfair
progressive	___	___	___	___	___	___	___	traditional
complete	___	___	___	___	___	___	___	incomplete
meaningful	___	___	___	___	___	___	___	meaningless
successful	___	___	___	___	___	___	___	unsuccessful
unimportant	___	___	___	___	___	___	___	important
discouraging	___	___	___	___	___	___	___	encouraging
interesting	___	___	___	___	___	___	___	boring
hazy	___	___	___	___	___	___	___	clear
dirty	___	___	___	___	___	___	___	clean
relaxed	___	___	___	___	___	___	___	tense
ugly	___	___	___	___	___	___	___	beautiful
sharp	___	___	___	___	___	___	___	dull
weak	___	___	___	___	___	___	___	powerful
colorful	___	___	___	___	___	___	___	colorless

Appendix E

Activity Sheet

Activity Sheet

Date Closed:_____ A.S.No.____

Student: _____

Start Date:_____ Estimated Close Date: _____

Initiator: _____

Goal/Need: ☐ PR ☐ Student

Issue/Concept/Topic, Etc.

Career

Academic

Personal Development

Specific Goals (Behavioral Objectives)

ACTIVITIES: List and Describe

Student Comments & Assessment of the Learning Activity:

Manager Comments and Assessment of the Learning Activity:

Appendix F

Student Interview Form

Student Interview Form

1. What are your immediate plans?

   a. Loaf
   b. Work
   c. Go to school
   d. Go to service
   e. Housewife

   How long do you plan on doing "this"?

   Why are you planning on doing "this"?

2. Do you now know what career you intend to follow?

   Did the EBCE program influence your decision in any way?

   You indicated at the beginning of the _____ a desire or interest in the __(career)_____. Do you still intend to pursue _____?

   What are the reasons why you are or are not?

   Did the EBCE program have any influence?

3. What are the things you remember most of the employer sites you liked best?

   ....you liked least?

4. Do you now have more or less jobs or job opportunities of interest to you? (Explain.)

   Do you now have more or no more job opportunities that you know about? (Explain.)

5. Which site had the most positive effect on you?

   ....most negative effect on you?

   How were you treated at the employer site? (Part of the group or on your own)

6. Can you tell me what you expected from the EBCE program when you first entered the program?

   Was the program the same as what you thought it would be? (Explain.)

7. How well did the EBCE program meet your school requirements?

   ....career or job interests?

8. Do you have any interests now that you did not have previously?

   Career--

   Non-career--

9. What have you specifically gained from the EBCE program?

10. What would you have gained more of at your home school?

11. Would you select to participate in the EBCE program again?

12. If you were given the opportunity to spend another year with the EBCE program, would you?

13. What changes should be made in the EBCE program to make it a better program?

14. Did you have enough peer (explain) interaction or did you feel left out of events with students your own age?

15. What or how did you interpret education on the Semantic Differential?

Appendix G

Parent Interview Schedule

Parent Interview Schedule

Parent _____

Interviewer _____

Date _____ Time _____

1. How did the Career Education Program (_____) participated in compare with his (her) educational program from past years? (Possible variables: educational value, work lead, etc., overall)

   Better _____ About the same _____ Worse _____

   Explain.

2. Do you believe (_____) liked his (her) program Better _____ About the same _____ Worse _____ this year as compared with last year?

   Explain.

3. Have you noticed any specific changes in the behavior of (_____ _____) during the past year? (Examples might be more confidence, better self-concept, less disciplined, etc.)

   List positive changes.

   List negative changes.

4. Do you believe (_____) learned as much in his (her) subject areas this year as compared to last year?

   Better _____ About the same _____ Worse _____ Don't know _____

   Explain. (Probe into amount of work done, understanding, etc.)

5. What do you believe (_____) would have gained more of at his (her) home school?

6. What do you believe (_____) gained more of in the EBCE program than he (she) would have in the home school?

7. What would you consider the greatest weaknesses of the program? (Possibly a probe would be what changes...)

8. What would you consider the greatest strengths of the program?

9. How has the program affected (_____) career plans? (Have they changed?)

   More sure _____ No change _____ Less sure _____

   Explain. (One probe might be - Are you happy with the choice or decision?)

10. Would you want (_____) to participate in the program again knowing what you now know?

    Yes _____ No _____

    Why?

11. If you have (or had) a younger son or daughter, would you want him or her to participate?

    Yes _____ No _____

    Why?

12. Do you believe you have received enough information from the staff about (_____) progress?

    Yes _____ No _____

    Why or where?

13. Do you have any other comments you would like to make about the program (positive, negative, or suggestions)?

Interviewer's Summary Statement:

Appendix H

Parent Questionnaire

APPALACHIA
Educational Laboratory, Inc.
P. O. BOX 1348
CHARLESTON, WEST VIRGINIA 25325
304/344-8371

Dear Mr. and Mrs.

As you know, the Career Education Program _____ is participating in this year is in a continuing process of improvement and therefore an evaluation of efforts to date is extremely important. You can help us to improve the program for _____ and to help make it a better program for next year if you would answer the following questions. Please return the answered questions in the enclosed self-addressed envelope.

1. To what extent does _____ talk about the Career Education Program at home?

   A great deal ___ Some ___ None ___

2. How does the Career Education Program compare with the educational programs from past years?

   Better ___ About the same ___ Worse ___

   Please explain the reason for your answer.

Mr. and Mrs.
Page 2

3. For whom would you recommend this Career Education Program? (choose one answer)

   All students ___
   All college bound students ___
   All students not going to college ___
   All students not satisfied with their present school ___
   No students ___
   Other ___

   Please explain the reason for your choice.

4. Have the career plans for _____ changed since the start of the program?

   Yes ___ No ___

   If you answered yes, would you please explain how the plans have changed?

5. Do you find the Career Education Program's reporting system adequate in providing you with information about _____?

   Yes ___ No ___

   What do you particularly like or dislike about the reporting system?

6. Do you feel that you are always able to talk with the program staff?

   Yes ___ No ___

7. Would you jot down some ideas you might have for improving the program?

Sincerely,

James H. Sanders, Ed.D.
Evaluation Specialist
Research and Evaluation Division

JHS/fda

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